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XXI.—*On the History and Migration of Cultivated Plants producing Coffee, Tea, Cocoa, etc.* By the late JOHN CRAWFURD, Esq., F.R.S., President of the Ethnological Society.

[Read June 9th, 1868.]

THE plants of which I propose to render some account in the present paper, being neither narcotic, like tobacco and opium, nor stimulating and intoxicating, like fermented and distilled spirits, may, I think, be classed as “exhilarants.” They were all unknown, not only to the people of ancient, but of medieval Europe. Indeed, down to the beginning of the seventeenth century, they were unknown even to modern Europe. Yet they have produced in Europe, in the course of two centuries, such a revolution in habits and manners that I feel justified in considering them as coming legitimately within the province of ethnology. They are the familiar commodities, coffee, tea, and cacao; the first of which we owe to Abyssinia, the second to China, and the last to Mexico,—remote regions, all of them as unknown to Greeks and Romans as they were to one another.

I begin with coffee. The *Coffea Arabica* of botanists belongs to the same natural family of plants as the Peruvian bark or cinchona, namely to the *Rubiaceæ*. There are, at least, a dozen species of the genus to which coffee belongs, but it alone is cultivated, and yields the coffee of commerce. The plant, although taking its scientific name from Arabia, is not a native of that country, but of Abyssinia and the neighbouring parts of Africa, where it is still to be seen in the wild state. From these countries it was brought to Arabia in comparatively recent times. Mr. Lane, the learned translator of the *Arabian Nights*, tells us that this happened about the year 1450. It was not known to the Arabs, therefore, until 823 years after the Hejira, and its introduction into Arabia dates but forty-two years before the discovery of America.

Dr. Beke informs us that the Arabic name for the berry, and, it may be presumed, for the plant also, is *bun*, which he supposes to be an African word. The name for the decoction of the roasted berries, however, is *kahwah*, an old Arabic word for a kind of sweet wine or fermented liquor; and it is this word which has found its way, in many forms, into all the languages of Europe, as well as into some of those of Asia. Thus, we have the word in French as *café*, in English as coffee,

in Spanish as *café*, and in Italian as *caffé*. All these are, in fact, taken immediately from the Turkish pronunciation of the Arabic word, which changes the labial consonant *w* into *v*, which the Europeans have again converted into an *f*, while they change the final vowel-form into *e*, and omit the aspirate.

The consumption of coffee in Arabia had to encounter a difficulty in its commencement on account of its unlucky name, the Mahomedan doctors, who unite in their own persons the three learned professions of Europe, denouncing it on this ground as an unlawful potation. In time, however, coffee beat the doctors, and became a favourite beverage with the Arabs, and like tobacco, equally unknown to the Arabian prophet, the more so that it was a substitute for what was forbidden. From Arabia it spread to Turkey, and from Turkey it found its way to Europe. The greatest curiosity about the use of coffee is the discovery of its property by roasting, as the seed in its raw state is insipid until its virtues are developed by a partial torrefaction. Who discovered this process is not known; but it was most probably the Arabs, for the Christians of Abyssinia, on what pretext is unknown, hold its use to be unlawful, and do not cultivate it for their own use.

The English appear to have been the first European people who used coffee as a beverage. A Turkish merchant of London, of the name of Edwards, brought the first bag of coffee to London, and his Greek servant made the first dish of coffee in England. This was in 1652, and, of course, under the government of Cromwell. In 1658, some merchants of Marseilles introduced coffee into France, and in the same year the traveller Thévenot regaled his guests with it in Paris on his return from the east. But it was really brought into fashion in France next year through the Turkish ambassador, who treated his fashionable guests with it at his hotel. It soon became fashionable, but from its extravagant price, its use must have been confined to a few of the upper classes. Pope, in the *Rape of the Lock*, published in 1712, represents politicians as sipping it with "half-shut eyes," having probably some noted personage of the time in view. For near seventy years from its first introduction, the consumption of coffee was confined to the produce of Arabia; and the history of its introduction into the colonies of European nations is a very remarkable incident. The old Dutch East India Company carried on some trade from Java to the Arabian ports on the Red Sea; and the Dutch Governor-General of the time, Van Hoovne, having a taste for horticulture, caused some ripe coffee-seeds to be brought to him to Java. They were sown at Batavia, and grew. A single plant was sent home, was planted in the

Botanic Garden of Amsterdam, grew, produced fruit, and from the fruit plants were multiplied. The first plant was sent from Batavia to Holland in 1690, and from its offspring plants were sent, in 1718, to Surinam, and forthwith the Dutch planters of that colony engaged in the cultivation of coffee. From Surinam the cultivation was extended to the English and French West India colonies, and in course of time to the Portuguese. From the West Indies, plants were carried to the East Indies, to Java, to Sumatra, to Celebes, to the Philippines, and in our own time the culture has been successfully extended to Ceylon and Southern India. The single plant, therefore, sent to Holland from Java has been the parent of all the coffee now produced, the small quantity produced in Arabia excepted.

Coffee is essentially a tropical plant, and grows readily from the tropics to the equator, thriving best, like the vine, not in the level plains, but on hillsides, and near the equator attaining most perfection at an elevation of from 2,000 to 3,000 feet above the sea-level.

The stubborn habits of eastern Asia have prevented the Hindoos, the Chinese, and others, from imitating the nations of Europe in the use of coffee. As a beverage it is wholly unknown to them, and even those nations in whose country it is extensively cultivated, and to whom it is accessible at the meanest price, decline to use it.

Among cultivated plants of general use, the history of coffee is peculiarly satisfactory, since we can trace it throughout. We know the country in which it is found in its wild state; we know the people who first cultivated it and used it as a beverage; we know the time and manner in which its consumption was introduced among the civilised nations of Europe; and we know the time and manner in which its cultivation was introduced into nearly every tropical region of the Old and New World. These are details which we do not possess respecting any other plant of equal economic importance.

Tea.—This plant, an exotic in Europe, has acquired its vast importance as food and in commerce and finance in the comparatively short period of a century and a half. It is at present considered by botanists to be a single species of a genus which, from its native Chinese name, they have called *thea*. Under cultivation, it sports into many varieties, arising from soil, climate, and modes of culture,—a character in which it bears a close resemblance to the vine. The genus bears so close a resemblance to the *Camellia* that some botanists have considered them one and the same. The tea plant is found wild in those parts of China in which it is most extensively

cultivated ; in Japan, in Tonquin, and in Cochin-China ; in the country of the Burmahs, and in Assam and Cachar. Its native climate seems to extend from the sixteenth to the thirty-first degree of latitude ; but the climate most congenial to it, if we are to judge by success in culture, is confined to between the twenty-sixth and the thirty-first degrees of latitude, of which the example is the favoured tea districts of China.

The name for tea is derived, in all the languages of Europe and Asia, from its name in the most current of the oral languages of China, that of the ancient metropolitan province of Kyangnan. This is *cha* or *tsa*, which—in the dialect of Fokien, the province with which Europeans had their earliest intercourse with China—is corrupted into *ta* and *te*. The Persians, and from them the Hindoos, have adopted the more correct name *cha*, or, with a final aspirate, *chah*. Among European nations, the Portuguese alone—the first European people who held direct intercourse with the Chinese—have adopted the uncorrupted word, while all the rest have adopted the corrupt one, with such orthographic varieties as the Spanish and Italian *té*, the French *thé*, the Dutch *thee*, and the English *tea*. I imagine that our English name was taken from the Dutch, for it was from Holland that we received our earliest supplies. But even the Dutch themselves received their first supplies, not direct from China, but through Java, then frequented by the junks of China. In time, we ourselves did the same, and the gift of a few pounds of tea, presented to Charles II by the East India Company, was derived from their factory at Bantam, in Java. The name in Malay and Javanese is taken from the dialect of Fokien, and written and pronounced *teh*, which, I suspect, is the immediate source both of the Dutch and English names. If we were to judge by a well-known couplet of Pope, in which the word is made to rhyme with “obey”, the Malay pronunciation was the correct one in the time of Queen Anne, and if so, the Irish ought to be the correct one now. We cannot be quite sure of this, however, for Pope was not always correct in his rhymes, and we find him remonstrated with on this head by Swift. But besides this, the lines in which tea-drinking and statesmanship are combined are burlesque, and the poet may have thought that an imperfect rhyme added to the grotesqueness of the combination.

The Chinese appear to have been the only people, of whose country the tea-plant is a native, who had the ingenuity to discover the virtue that lay hidden in its leaves. It is but a mere luxury ; and civilisation, therefore, we may conclude, must have made considerable advances before luxuries came to be in demand, and such advances the Chinese must have

reached when they began to cultivate the tea-plant. At what time this took place, the Chinese themselves have no reliable record, but the earliest date which they ascribe to it is the eighth century of our time. If this be true, the builders of the great wall knew nothing of tea, for its use was unknown until thirteen centuries after its construction. That the discovery, however, took place at so recent a period is not probable; for we find the Arabian traveller Soliman, who visited China but a century later (A.D. 851), giving an unmistakable account of tea and its use. He tells us that the imperial revenue was derived from a poll-tax, a salt-tax, and a tax "on a certain herb which the Chinese drink with hot water, and of which great quantities are sold in all the cities of China, to the value of large sums. They call it *tcha*, and it is a shrub more bushy than the pomegranate, and of a more agreeable smell, but has a kind of bitterness in it." This account of tea and its use in China, written a thousand years ago, would answer for the present day. It was used all over the empire in the manner in which it is now used, and its consumption was so general that it is classed with salt in contributing to the public revenue. Considering the tardy advance of all progress among oriental nations, it is not, it may safely be concluded, likely that so great a change could have taken place within the brief compass of a single century. We may therefore conclude that the culture of the tea-plant in China is of considerable antiquity, although we are unable to affix any actual date to it.

The Japanese assert that the culture of tea was introduced into their country at a time corresponding to the ninth century of our own era, or with the time that Soliman, the Arabian traveller, visited China. The people of Anam, or Tonquinese, and Cochin-Chinese, also received the culture of tea from China; and in corroboration of this fact it may be added, that both the oral name and written symbol are the same in the Anam and Japanese languages as in the Chinese.

The Portuguese were the first European people who held direct intercourse with China, but they did not reach that country until A.D. 1517, or near twenty years after their arrival in India. They had, however, visited Malacca eight years, and conquered it six years, earlier; and as that place was, at the time, frequented by Chinese ships, they must have seen tea. The quantity, however, must have been inconsiderable; for the best of the Portuguese writers, Barbosa, who enumerates no fewer than seventeen articles of the cargoes of the Chinese junks, does not include tea as one of them. The Portuguese, however, must have been the first to make tea known to Europe; but it was not through them, who have never attached

much importance to it as a beverage, that its use was disseminated among the other nations of Europe. This was effected by the Dutch, whose arrival in China was by a century later than that of their rivals. Even their first knowledge of the article was derived, not from a direct intercourse with China, but, as already stated, through the trade of the junks of China, which frequented the emporium of Bantam, in the island of Java.

As early as 1637 tea is said to have been occasionally sold in England at the exorbitant price of from £6 to £10 per pound weight. In 1659 and 1660, Garraway, the coffee-house keeper, sold it at from 15s. to 50s., according to quality. Its consumption seems to have made but very slow progress, for we find Pepys, in his *Diary*, under the date of September, 1661, making the oft-quoted entry, "I sent for a cup of tea, a Chinese drink, of which I never drank before." In the same year, the East India Company made a rare gift to His Majesty Charles II, namely, "two pounds and two ounces of tea." This was obtained at Bantam, and must have been what is now called in the trade "junk tea"; that is, an inferior black tea, imported by the Chinese junks for the use of the Chinese colonists in the countries adjacent to China. Waller ascribes the introduction of tea into England to the queen of Charles II, but as Catherine of Braganza did not arrive in England until 1662, this was evidently only the invention of a poet.

The first order for tea by the East India Company, as an article of trade, amounted to no more than one hundred pounds. This also was, at first, ordered from the factory of Bantam, but was eventually executed in China. It was greatly exceeded; for the actual importation amounted to 4,731 lbs., a quantity which overstocked the market for several years. At the close of the seventeenth century, our entire consumption was no more than 20,000 lbs. In the first quarter of the eighteenth century, the tea seems to have already become fashionable among persons of rank; and Pope, in his *Windsor Forest*, published in 1713, mentions its use in the passage to which I have already referred:—

" Here thou, great Anna, whom three realms obey,
Dost sometimes counsel take, and sometimes tea."

The consumption at this time did not exceed 300,000 pounds' weight.

Our earlier and more familiar acquaintance with the New World, compared to our knowledge of China, at the time a far more important country, is shown by the early introduction among us of some of the productions of the former and the

tardy one of tea. The turkey is named by Shakespeare as if already well known in England, but Waller is the first classic writer who makes mention of tea.

The progress which the consumption of tea has made in our own country during the last two centuries, struggling all the while against monopoly and high taxation, is unequalled in any other commodity. The yearly consumption of a washerwoman of our day far exceeds in quantity and quality the rare gift presented to Charles II the year after his return, or restoration. At the close of the seventeenth century our consumption was 20,000 lbs., and it now considerably exceeds 100,000,000. The produce of the tax on it exceeds the entire revenues of the government of the Restoration, although the tax be but sixpence a pound.

Besides ourselves, the Dutch and our brethren across the Atlantic are among the nations of the European races the greatest consumers of tea; other European nations giving a preference to coffee, although also consuming it to a considerable and increasing extent.

Among oriental nations not in the immediate neighbourhood of China, the western Tartars have been immemorially consumers of tea, and so have been the Persians. Olearius, an envoy of the Duke of Holstein, and a traveller of the seventeenth century, states that Chinese tea, received through the Usbecks, was consumed by the Persians when he visited their country in 1633. He describes them as boiling instead of infusing it, which is known to be the practice of the Tartars down to the present day. The tea consumed by the Persians in the seventeenth century was, no doubt, the coarse article called brick-tea, but at present the use of good tea is common with the wealthier classes. In more modern times they received their supply from Russia, the article being the well-known caravan tea, of excellent quality but of exorbitant price. At present the southern provinces of Persia are supplied with tea through British India and the northern direct from England.

The largest consumption of tea is, of course, in China itself, for it is used by all classes, and, like tobacco and maize, is grown in nearly every province of the empire. Its consumption is almost equally general in Japan and Anam.

The culture of tea beyond its native country is far from having attained the same wide geographical dissemination as coffee, which, in a suitable soil and locality, flourishes in every parallel within the tropics,—that is, over some forty-seven degrees of latitude. It is not so with tea; for, although this plant grows freely even at the equator, it will not yield good tea, or even what is tolerably good, except from about the twenty-sixth to

the thirty-first degree of latitude. The tea of Tonquin and Cochin China, grown between the sixteenth and eighteenth degrees of latitude, instead of being infused, has to be boiled in order to obtain from it such small virtue as it possesses. Even then it is but a poor and weak beverage, as I had myself an opportunity of observing when in the country. Even the southern provinces of China itself produce but an indifferent tea, very little of it fit for exportation.

The cultivation of coffee, originally confined to a small part of Arabia, came very early to be widely spread. Not so that of tea, of which the culture beyond China has only been tried in our own time. The first attempt was made in Brazil, in about the twenty-third degree of south latitude, but it was not successful. The Dutch, with far more skill but no better success, have attempted the growth of tea in the mountainous parts of Java, and produced a very unmarketable article. In the sixth and seventh degree of south latitude a suitable elevation, easily obtained, would produce the necessary degree of cold, and had the tea plant been an annual, such a locality would have been suitable; but it is a perennial, requiring rest; and as in Java there is no alternation of summer and winter, we may safely foretell that the culture of tea cannot be successful in that island. The culture is at present carried on with far better prospect of success in the mountains and valleys of the Himalayas and Assam, but especially in the latter, in which the plant has been found in its wild state, and is now so successfully cultivated that at present there is a considerable export of it. The tea plant of Assam has some peculiarities which induced the late illustrious botanist Robert Brown, as he told myself, to consider it not a variety, but a distinct species from that of China. It is probably the same with the plant which the Burmese call lap-pet, and which, preserved in oil, they eat in the manner that we do olives. To the Burmese and Assamese the cultivation of tea was unknown; an example, among many others, of their inferiority to the Chinese, if, indeed, additional evidence were necessary.

But it is not climate, soil, and suitable locality only that are indispensable to the successful economic cultivation of tea: cheap labour is not less necessary to success in an article which demands not only skilful culture, but an extraordinary amount of skilful manipulation both in gathering and curing the crop. In this matter China will long have the advantage of every other part of the world, and Japan is far more likely to compete with it than any part of our Indian possessions.

The only other article of importance belonging to the class of which I am now attempting to give some account, is the

Cocoa or *Cocoa*. This is the produce of several species of a genus of plants to which botanists have given the name of *Theobroma*, signifying "food of the gods." Notwithstanding its fine name, the genus belongs to the natural Order of *Sterculiaceæ*, a name derived from the ill odour of its leaves and flowers. The seeds of the pods are the usual esculent parts of the plant, and which constitute the cocoa of commerce, and these again, ground with sugar and spices, make the well-known article chocolate. These two words come from the language of the Aztecs or Mexicans, written in Spanish orthography *cacahuatl* and *chocolatl*. These words, with various modifications of pronunciation, have been adopted in all the languages of Europe. The Mexicans were found cultivating the *cocoa* when first seen by the Spaniards, and hence it is that these names come from their language.

The *cocoa* is a shrub, growing to the height of ten or twelve feet, and is exclusively a native of the hot and damp parts of tropical America. Mr. Bates, in his interesting and instructive work, describes it as found growing wild in the forests of the Amazon, the fruit in this case differing from that of the cultivated plant in no respect, except in being less abundant. The culture of the *cocoa* is nearly confined to the American continent and its islands, the one partial exception being the Philippines, where it has not been attended with much success.

The *cocoa* beans, or pods, grow from the stem of the plant, are of a red colour, and in shape resemble gerkins, or young cucumbers. The esculent seeds consist of albumen, of a small quantity of the same principle which gives their peculiar virtue to tea and coffee, namely, *theine*, and of an abundant oil, from which is derived its peculiar aroma.

The chief consumers of *cocoa* are the Spaniards and Portuguese, the European nations of whose colonies the plant is a native. All the other European nations, however, consume it in smaller quantity. The taste for it has never extended to any Asiatic peoples, all of them, whether tea or coffee consumers, rejecting it. The Mexicans and Peruvians were found cultivating and using *cocoa*, not only as food but as money, when first seen by the Spaniards, so that its first use is fully as untraceable as that of tea.

Maté.—The only other commodity which can be classed with the three plants which I have now described, is the *Maté*, or Paraguay tea. This consists of the leaves of a species of *ilex*, or holly, which takes its name from its native country, Paraguay. On analysis it yields, like tea, coffee, and *cocoa*, a small quantity of *theine*, to which it owes its virtue. It is a coarse, flavourless article, which has found no acceptance in Europe,

but is largely used in South America, where the yearly consumption has been estimated at forty millions of pounds.

Tea, coffee, and *cocoa*, but more especially the two first, have been main agents in the great revolution which, within the last two centuries, has taken place in the manners and customs of the nations of Europe. They have unquestionably added greatly to our comforts, and probably, also, conduced to refinement and sobriety. The two most important of them we owe to Africa and Asia, and by far the least so to America.
